AMENDMENTS TO THE CLAIMS

Listing of Claims:

Claim 1 (Previously presented): A method of transmitting data through a communication link having a bandwidth using a plurality of communication connections via the communication link, the method comprising the steps of:

associating each one of a plurality of worker objects for each one of the plurality of communication connections;

distributing the data amongst the worker objects;

forming messages using the distributed data within each respective worker object of the plurality of worker objects, based on a parameter of the respective worker object;

wherein a first worker object has a first parameter value configured to establish a first respective predetermined portion of the bandwidth and a second worker object has a second parameter value configured to establish a second respective predetermined portion of the bandwidth which is different from the first respective predetermined portion of the bandwidth;

delivering the messages formed within each worker object to an underlying layer of the plurality of communication connections so that each communication connection uses no more than the respective predetermined portion of the bandwidth; and

allocating the predetermined portion of the bandwidth to each of the plurality of communication connections.

Claim 2 (Cancelled).

Claim 3 (Previously Presented): The method of claim 1, wherein the step of allocating the predetermined portion of the bandwidth to each of the plurality of communication connections includes the step of allocating different predetermined portions of the bandwidth to two of the plurality of communication connections.

Claim 4 (Previously Presented): The method of claim 1, wherein the step of allocating the predetermined portion of the bandwidth to each of the plurality of communication connections includes the step of setting a time between calls parameter for each of the plurality of communication connections.

Claim 5 (Previously Presented): The method of claim 1, wherein the step of allocating the predetermined portion of the bandwidth to each of the plurality of communication connections includes the step of setting a message size parameter for each of the plurality of communication connections.

Claim 6 (Previously Presented): The method of claim 1, wherein the step of allocating the predetermined portion of the bandwidth to each of the plurality of communication connections includes the step of setting a sending buffer size for each of the plurality of communication connections.

Claim 7 (Cancelled).

Claim 8 ((Previously presented): The method of claim 1, wherein the step of associating the worker object for each one of the plurality of communication connections includes the step of using the worker object to produce one of the plurality of communication connections.

Claim 9 (Previously presented): The method of claim 1, further comprising the step of partitioning the data to form a plurality of partitioned data streams prior to distributing the data to the worker objects.

Claim 10 (Original): The method of claim 9, wherein the step of partitioning the data to form the plurality of partitioned data streams prior to distributing the data amongst the worker objects includes the step of partitioning the data based on a type of data.

Claim 11 (Original): The method of claim 9, wherein the step of partitioning the data to form the plurality of partitioned data streams includes the step of establishing a one-to-one correspondence between the plurality of partitioned data streams and the worker objects.

Claim 12 (Previously presented): The method of claim 1, wherein the step of distributing the data to the worker objects includes the step of transferring a subset of the data to one of the worker objects in response to a request for data from the one worker object.

Claim 13 (Previously presented): The method of claim 1, wherein the step of distributing the data to the worker objects includes the step of using a data transmission object.

Claim 14 (Previously Presented): The method of claim 1, wherein the step of forming the messages using the distributed data within each worker object includes the step of forming the messages within each worker objeet using a parameter of the worker objeet that controls the size of the messages.

Claim 15 (Original): The method of claim 1, wherein the step of delivering the messages formed within one of the worker objects includes the step of delivering the messages formed within the one worker object to the underlying layer based on a parameter of the one worker object that affects the rate at which the messages are delivered to the underlying layer.

Claim 16 (Original): The method of claim 15, wherein the step of delivering the messages formed within the one worker object to the underlying layer based on the parameter of the one worker object that affects the rate at which the messages are delivered to the underlying layer includes the step of using a time between calls parameter.

Claim 17 (Previously presented): A system for transmitting data through a communication link having a bandwidth using a plurality of communication connections via a communication link, the system comprising:

a communication object that distributes the data amongst the plurality of communication connections; and

a plurality of worker objects, wherein each worker object is associated with one of the plurality of communication connections and is configured to form messages using the data distributed to the communication connection associated with that worker object based on a parameter of that worker object,

wherein a first worker object has a first parameter value configured to establish a first respective predetermined portion of the bandwidth and a second worker object has a second parameter value configured to establish a second respective predetermined portion of the bandwidth which is different from the first respective predetermined portion of the bandwidth, and

wherein each worker object is configured to deliver the messages formed within that worker object to an underlying layer of the plurality of communication connections so that each communication connection uses no more than the respective predetermined portion of the bandwidth allocated to that communication connection.

Claim 18 (Previously presented): The system of claim 17, wherein each of the plurality of worker objects is adapted to produce a communication connection.

Claims 19-21 (Cancelled).

Claim 22 (Original): The system of claim 17, wherein the communication object transfers a portion of the data to one of the plurality of worker objects in response to a request for data from the one worker object.

Claim 23 (Original): The system of claim 17, wherein the communication object is a data transmission object.

Claim 24 (Original): The system of claim 17, wherein each of the plurality of worker objects includes a set of uniquely configurable communication parameters.

Claim 25 (Original): The system of claim 24, wherein the set of uniquely configurable communication parameters includes a parameter that controls the size of the messages.

Claim 26 (Original): The system of claim 24, wherein the set of uniquely configurable communication parameters includes a parameter that controls the rate at which the messages are delivered to the underlying layer.

Claim 27 (Original): The system of claim 26, wherein the parameter that controls the rate at which the messages are delivered to the underlying layer is a time between calls parameter.

Claim 28 (Original): The system of claim 24, wherein the set of uniquely configurable communication parameters includes a parameter that controls a buffer size.

Claim 29 (Previously presented): A system for transmitting data through a communication link using a plurality of communication connections via the communication link having a bandwidth, the system comprising:

a communication process configured to partition the data to form a plurality of partitioned data streams; and

a plurality of worker processes, wherein each one of the plurality of worker processes is configured to have a set of uniquely configurable communication parameters, is configured to receive the partitioned data from the communication process, is configured to form messages using the partitioned data, and is configured to deliver the messages containing the partitioned data to an underlying layer of the plurality of communication connections based on the set of uniquely configurable communication parameters for that worker process,

wherein a first worker object has a first parameter value configured to establish a first respective predetermined portion of the bandwidth and a second worker object has a second parameter value configured to establish a second respective predetermined portion of the bandwidth which is different from the first respective predetermined portion of the bandwidth.

Claim 30 (Original): The system of claim 29, wherein the communication process is based on a data transmission object.

Claim 31 (Original): The system of claim 29, wherein the communication process partitions the data based on a type of data.

Claim 32 (Original): The system of claim 29, wherein each of the plurality of worker processes is based on a worker object.

Claim 33 (Cancelled).

Claim 34 (Original): The system of claim 29, wherein the set of uniquely configurable communication parameters includes a parameter that controls the rate at which the messages are delivered to the underlying layer.

Claim 35 (Original): The system of claim 34, wherein the parameter that controls the rate at which the messages are delivered to the underlying layer is a time between calls parameter.

Claim 36 (Original): The system of claim 29, wherein the set of uniquely configurable communication parameters includes a message size parameter.

Claim 37 (Original): The system of claim 29, wherein the set of uniquely configurable communication parameters includes a sending buffer size parameter.

Claim 38 ((Previously presented): A system for transmitting, data through a communication link having a bandwidth, comprising:

a communication station having a processor and a memory communicatively coupled to the processor, wherein the processor is programmed to provide a plurality of worker objects, wherein each one of the plurality of worker objects is configured to form messages using one of a plurality

of partitioned data streams and to produce a separate communication connection through the communication link,

wherein a first worker object has a first parameter value configured to establish a first respective predetermined portion of the bandwidth and a second worker object has a second parameter value configured to establish a second respective predetermined portion of the bandwidth which is different from the first respective predetermined portion of the bandwidth,

and wherein each of the plurality of worker objects includes a set of communication connection parameters that are uniquely configurable to determine the manner in which the messages are sent by each of the plurality of worker objects to an underlying layer of the communication link.

Claim 39 (Original): The system of claim 38, wherein the communication station is a sending communication gateway.

Claim 40 (Original): The system of claim 38. wherein the communication station is a receiving communication gateway.

Claim 41 (Original): The system of claim 38, wherein each of the separate communication connections uses a eonnection-oriented communication protocol.

Claim 42 (Cancelled).

Claim 43 (Original): The system of claim 38, wherein the set of communication connection parameters includes a message size parameter.

Claim 44 (Original): The system of claim 38, wherein the set of communication connection parameters includes a message size parameter and a time between calls parameter.

Claim 45 (Original): The system of claim 38, wherein the set of communication connection parameters includes a sending buffer size parameter.

Claim 46 (Original): The system of claim 38, wherein the processor is further programmed to cause messages containing a particular type of data to be sent through a particular one of the separate communication connections.

Claim 47 (Previously Presented): The system of claim 38, wherein the processor is further programmed to partition the data into the plurality of partitioned data streams based on type of data and to transfer partitioned data from one of the plurality of partitioned data streams to one of the plurality of worker objects.

Claim 48 (Original): The system of claim 47, wherein there is a one-to-one correspondence between the plurality of partitioned data streams, the plurality of worker objects and the separate communication connections.

Claim 49 (Previously presented): A method of transmitting data through a communication link by a communication gateway device, comprising the steps of:

associating each one of a plurality of worker processes to each one of a plurality of communication connections, wherein each one of the plurality of worker processes is configured to receive data, messages of the data, and to send the messages containing the data to an underlying layer of the communication link having a bandwidth;

uniquely configuring a set of communication connection parameters uniquely associated with each of the plurality of worker processes;

producing a separate communication connection for each one of the plurality of worker processes,

wherein a first worker object has a first parameter value configured to establish a first respective predetermined portion of the bandwidth and a second worker object has a second parameter value configured to establish a second respective predetermined portion of the bandwidth which is different from the first respective predetermined portion of the bandwidth; and

delivering the messages from at least one of the plurality of worker processes to the underlying layer for transmission through the communication link based on the respective set of communication connection parameters uniquely associated with the at least one of the plurality of worker process.

Claim 50 (Original): The method of claim 49, wherein the step of establishing the plurality of worker processes that each receives the data and that each sends the messages to the underlying layer of the communication link includes the step of assigning a particular type of data to each of the plurality of worker processes.

Claim 51 (Cancelled).

Claim 52 (Original): The method of claim 49, wherein the step of uniquely configuring the set of communication connection parameters uniquely associated with each of the worker processes includes the step of configuring a message size parameter for each of the worker processes.

Claim 53 (Original): The method of claim 49, wherein the step of uniquely configuring the set of communication connection parameters uniquely associated with each of the worker processes includes the steps of configuring a message size parameter for each of the worker processes and configuring a time between calls parameter for each of the worker processes.

Claim 54 (Original): The method of claim 49, wherein the step of uniquely configuring the set of communication connection parameters uniquely associated with each of the worker processes includes the step of configuring a sending buffer size parameter for each of the worker processes.

Claim 55 (Original): The method of claim 49, wherein the step of uniquely configuring the sets of communication connection parameters uniquely associated with each of the worker

processes includes the step of configuring the sets of communication connection parameters to provide a reserved bandwidth for retransmissions.

Claim 56 (Original): The method of claim 49, wherein the step of delivering the messages from the one of the worker processes to the underlying layer for transmission through the communication link based on the set of communication connection parameters uniquely associated with the one worker process includes the step of using a timer function within the one worker process to control the rate at which the one worker process delivers the messages to the underlying layer.

Claim 57 (Cancelled).

Claim 58 (Previously presented): The method of claim 1, wherein the step of allocating the predetermined portion of the bandwidth to each of the plurality of communication connections includes the step of setting a message size parameter and a time between calls parameter for each of the plurality of communication connections.

Claim 59 (Previously presented): The system of claim 17, wherein the communication object partitions the data to form a plurality of partitioned data streams prior to distributing the data to the plurality of communication connections.

Claim 60 (Previously presented): The system of claim 59, wherein the communication process partitions the data based on a type of data.

Claim 61 (Previously presented): The system of claim 59, wherein the communication object establishes a one to one correspondence between the plurality of partitioned data streams and the plurality of worker objects.

Claim 62 (Previously presented): The system of claim 29, wherein there is a one-to-one correspondence between the plurality of worker processes, the plurality of partitioned data streams and the plurality of communication connections.

Claim 63 (Previously presented): The system of claim 38, wherein the set of communication connection parameters includes a time between calls parameter.

Claim 64 (Previously presented): The method of claim 49, wherein the step of uniquely configuring the set of communication connection parameters uniquely associated with each of the worker processes includes the step of configuring a time between calls parameter for each of the worker processes.